



Kolbenschmidt Pierburg Compact Secondary Air Pump is Smaller, Lighter

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DETROIT ([PRWEB](#)) March 26, 2004 -- Kolbenschmidt Pierburg AG has developed a new compact secondary air pump that offers reductions in packaging size and weight while maintaining high durability standards.

The compact unit is a new member of the company's family of secondary air pumps and emissions control components. By adding this new unit, Kolbenschmidt Pierburg expects to gain a greater share of the global market for secondary air pumps.

"Frankly, our customers pushed us to offer a smaller version of our current secondary air pump," said Peter Hradowy, vice president sales & engineering of Pierburg, Inc., a unit of the Pierburg GmbH division. "We took the best features of our current design and decreased the size for customers who wanted a component better suited to smaller engines. The result is a new compact secondary air pump that is 25 percent smaller and 38 percent lighter."

"Although the larger unit could be used for smaller applications, packaging is often the limiting factor for many four-cylinder engines on the market," Hradowy said. Kolbenschmidt Pierburg designed its first secondary air pump to meet the needs of larger engines. The new compact unit is better suited to smaller applications.

Secondary air pumps are used on gasoline engines to inject air into the exhaust in cold-start conditions to heat exhaust catalysts more quickly and reduce carbon monoxide and hydrocarbon emissions. Because about 80 percent of pollutants are produced in the first 30 seconds after a cold engine starts up, the secondary air pump effectively lowers emissions.

The secondary air pump kicks in for about 20 seconds at startup any time the temperature of engine coolant is below about 70 degrees Fahrenheit. It pumps air through a series of impellers and introduces it directly into the exhaust system.

The new compact secondary air pump requires 0.7 seconds to ramp up to 90 percent performance, compared to 1.2 seconds for the larger unit. At 10 PSI, the flow rate of the current unit is 11 g/second of air. The compact unit pumps at a rate of 8g/ second at the equivalent pressure rate. Because each engine requires a unique flow rate, the unit can be designed to fit each specific vehicle application.

The weight of the compact unit is 700 grams, compared to 1.3 kg for the larger unit.

A key design advantage of the new pump is its durability. Seals in the unit isolate the motor from moisture and dirt both from the outside environment and from the airstream. The pump motor in the compact unit has been tested to provide a minimum 15-year life cycle and meets the automaker specifications for a 2007 model vehicle.

Kolbenschmidt Pierburg engineers also were mindful of noise. The new pump includes new materials in the



housing and a motor-support disk, located inside the housing, to aid in noise reduction.

Kolbenschmidt Pierburg first introduced the new compact secondary air pump to North American customers at private technology shows following the Frankfurt Auto Show.

The new pump is already being considered by two European automakers for 2006 model-year production. North American automakers also have expressed interest in the new pump.

A leading supplier of pistons, automotive oil and water pumps, electric throttle control, bearings, secondary air systems and electric exhaust gas recirculation valves, Kolbenschmidt Pierburg has three North American units: Pierburg, Inc., Karl Schmidt Unisia, Inc. and KS Bearings, Inc. -- with production facilities in Fountain Inn, S.C.; Greensburg, IN; Fort Wayne, IN; Marinette, WI, and Leamington, Ontario, in addition to its North American sales offices in Southfield.

Kolbenschmidt Pierburg AG is a subsidiary of Rheinmetall AG. The company has approximately 11,500 employees at its five automotive divisions. Global sales for its Aluminum Technology, Motor Parts, Pierburg GmbH, KS Pistons and KS Bearings divisions totaled nearly \$2.1 billion in 2003. Additional information is available on the Internet at www.kolbenschmidt-pierburg.com.

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